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Two innovations were brought to a teachers' college: television was introduced, and it was proposed to merge the college with a university. This study investigated the impact of the two types of change on the social system of the teachers' college from the point of view of the staff. A reaction process paradigm was conceptualized and 31 members of the staff were interviewed to test the validity of the paradigm. The interview data were content analyzed to isolate basic themes associated with reaction to change. Television made a minimal impact. The proposed merger produced a high stress reaction. Teachers felt threatened in their positions. It was evident that the reaction process paradigm provided a suitable model for understanding and documenting change as a process phenomenon in which the components of the process determine the impact of change on a social system. [Not available in hard copy due to marginal legibility of original document.] (GO)

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A PARADIGM FOR CHANGE: REACTION TO INNOVATION IN A TEACHERS' COLLEGE

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A PARADIGM FOR CHANGE: REACTION TO INNOVATION IN A TEACHERS' COLLEGE*

Introduction

This study was designed as a comparative analysis of two constructs of change, one essentially technological and the other social or organizational. The introduction of television as a technological innovation and the integration of a teachers' college with a university were investigated from the perspectives of the teaching staff of the college in order to determine the implications of the changes for social process within the college. In the past, analysis of change in social systems has often tended to disregard the systemic properties of the social system and confound changes in individuals with structural changes or modifications in the social system.[1] Although this study incorporates a theoretical explanation for individual reactions under the stress of change, the primary concern is directed toward the conceptualization of the longitudinal process of systemic change.

Reactions of receptivity and resistance to technological and social change have been defined to lie within an analytical framework of change as a reaction process, a process in which final outcomes will be the resolution of mitigating interpretations and accommodations. The degree to which social systems will be modified when confronted with change and innovation will depend on the nature and characteristics of the reaction process. Indeed whether or not a social system will change at all is expected to be a direct function of this reaction process.

The Reaction Process Paradigm

In order to provide a conceptual framework for the investigation, the paradigm presented in Figure 1 was developed. The paradigm is premised on distinctions between individual and/or group properties and properties of social systems. Thus although the paradigm can be employed to explain individual or group behavior, it was designed to be representative of a social process phenomenon characterized by the interaction of system components with external influences. A series of hypotheses were derived to test the operational validity of the model and the assumptions implicit in its development.

It was hypothesized that the first phase of the reaction process to change would involve an initial interpretation and projection of the possible consequences that the change will have for the social system. Since this study utilizes the perceptions of a relatively homogenous occupational group, it was anticipated that the interpretation phase would focus on considerations of economic security, occupational status, individual prestige, work definition, and control constraints.[2] Reactions to the initial question can be either positive

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*CCRE is pleased to bring you this paper. The ideas expressed are those of the authors.

[1]Daniel Katz and Robert L. Kahn, The Social Psychology of Organizations (New York: Wiley, 1966), 390.

[2]Goodwin Watson, "Resistance to Change", in Concepts for Social Change. (ed.) by Goodwin Watson, Washington: Published by National Training Laboratories, NEA, 1967, 10-25.

or negative, positive in the sense that the potential change is interpreted as posing no threat to present status, security, and work definition, and negative where present conditions are perceived as threatened. The extent to which the social system can legitimately control the impact of the innovation or change will be a prime determinant of the direction of the interpretation. In employing a process model of change an implicit assumption is that most contemporary social systems are not totally static but do have at least some flexibility, that is the capacity for absorbing a modicum of change. Thus for many changes the stress phase is not present and accommodation is immediate (Path 1).

If the change is interpreted negatively and the system is seen as being threatened, then the second phase of the reaction process is entered. The confronted social system is now placed under stress. For the individual members of the social system the stress phase of the paradigm would be characterized by generalized anxiety, dissatisfaction, and frustration.

Dependent upon the nature and intensity of the stress on the social system, the third phase of the reaction process will follow one of two possible alternatives, either accommodation or disorganization. If the stress is minor, the threat to the social system will be accommodated within the present capabilities of the system to handle change. The underlying assumption here being that most contemporary social systems, as well as having flexibility for absorbing continuing elements of change, can absorb stressful change but require a period of adjustment. In such cases the stress is resolved to some extent as a function of time and although the system manifests some of the properties of disorganization, the stress can be accommodated by stretching the mechanisms that sustain the basic social system. If this occurs, the reaction process terminates, as in Path 1, and the system remains basically unchanged (Path 2). However, if the stress is intense and of such a magnitude that it cannot be accommodated by the threatened social system, disorganization within that social system will result and the disorganization reaction will extend the original threat of change to challenge the very survival of the system.

In order to survive the process of disorganization the system must now enter a fourth phase in the reaction process. This phase takes the form of a system reorganization to both accommodate the stress of change and curtail the disorganizing consequences threatening the survival of the system. Where the stress produced by change is such that disorganization and reorganization within the system result[3], the system will undergo extensive modification and will be fundamentally different from that system which existed before the introduction of the change (Path 3).

In outlining the paradigm of change process, it can be seen that each stage in the reaction process along each of the three paths is a necessary condition for the evolvement of the following stage. For example, negative interpretation of the change or innovation must occur for stress reaction, and stress reaction is the necessary condition for social disorganization and so forth.[4]

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[3]The understanding of the disorganization and reorganization process is taken from Maurice R. Stein's penetrating analysis of community change. See Maurice R. Stein, The Eclipse of Community (New York: Harper & Row, 1964), 117-226.

[4]Postulating each phase in the reaction process as a necessary condition for evolvement to the following phase is based on the logic of 'value added process' as applied by Neil J. Smelser in his analysis of the determinants of collective behavior. See Neil J. Smelser, Theory of Collective Behavior (New York: The Free Press, 1962), 13-14.

The change reaction process represented by Path 3 of the paradigm implies that social systems will undergo fundamental change if and only if negative interpretation, stress, disorganization, and reorganization occur.

Design of the Study

Utilizing the paradigm, an investigation of the reaction of a teachers' college staff to the introduction of television and a planned merger with a university was undertaken to determine whether the observable reactions conformed to expectations generated from the paradigm. At the same time an attempt was made to determine whether the reaction process varied substantially for the two changes and if either reaction process had produced fundamental modifications in the basic structure of the social system.

The subjects of the study were 31 masters from a teachers' college in the Ontario teacher education system. During the school year 1967-68 this teachers' college was confronted with two basic changes. Firstly their plant was modified to include facilities for the use of television. A television studio and monitor systems were installed and staff members became involved in experimentation with television and the development of techniques for its utilization. Secondly, paralleling the introduction of the television facility, the teaching staff were confronted with the proposed merger of their relatively autonomous teacher education institution with a nearby university. Although still in the preliminary discussion stages, the initial proposals call for the complete integration of the teachers' college into the university community with the system taking on faculty status and staff members becoming members of the university staff.

A structured interview schedule with provision for unfocussed questions was the basic source of data. To facilitate comparisons, questions asked on the introduction of television were repeated in near identical form for the merger with the universities. Interviews were voluntary for the staff but over 90 per cent of the masters participated.

Simple content analysis was applied to the raw interview data and responses were classified into themes derived from the paradigm. The themes were weighted in terms of the percentage of respondents who made specific reference to each theme. If, for example, one theme was mentioned by 90 per cent of the respondents this would be evaluated as more significant than a theme to which only 30 per cent of the respondents made reference. Using this method the central concerns and perspectives could be delineated from those of lesser importance for the respondents.

Television and the Reaction Process

Analysis of responses to the innovation of television revealed that by far the most over-riding and extensive theme was the interpretation that television was merely a further addition to a spectrum of teaching-learning technologies already available. Implicit in this theme is that television is not perceived as an innovation but rather simply an extension to a world of phenomena already familiar to, and utilized within, the system. Some mention of television as "just a new media" or "another audio-visual aid" was made by 71 per cent of all respondents. The following excerpts illustrate the theme:

I think we'll use it as we do now with other visual aids.

...here is a tool that we can use to make the total teaching-learning process more efficient, just the same as radio had uses and film had uses and so on.

Well I think it's just like any of the other audio-visual equipment that we use in the institution.

I think it's only a tool the same as a film.

It's another audio-visual aid, an expensive and an elaborate one but it's an assistant to us. We're the Master; it's the servant if you like.

Referring to the reaction process paradigm it can be clearly seen that one of the initial interpretations of the introduction of television was positive with no threat perceived. The lack of a negative interpretation precluded the formation of a stress reaction and consequently the reaction process was terminated with the initial positive interpretation and the original social system remained unchanged. This process is represented by Path 1.

Although the dominant theme in response to the television innovation was a positive or non-threatening interpretation of its implications, two themes emerged that indicated slightly negative evaluation with consequent stress. The first of these was the perception of television contributing to more staff visibility among colleagues. Extension of work boundaries and potential evaluation by superiors and colleagues were seen as negative concerns leading to increasing requirements of time and care in the preparation of lessons. Forty-eight per cent of the subjects made apprehensive reference to the possibility of increased inter-staff visibility. The following excerpts illustrate this theme:

Well certainly you're going to have to get out of the mold because if you're involved in television and it's recorded then you have to be in a position for someone to be critical of your performance, so therefore, you're in a more vulnerable position.

I think there are some Masters who are probably more than just cautious, perhaps slightly anxious about just what it's going to do to their particular course. WHY DO YOU THINK THEY FEEL THAT WAY? I suppose traditional habit as much as anything else. If you've been teaching a course, presumably successfully, for a number of years in your own little classroom with your own little empire, anything that's going to force you to integrate with others may be a little threatening.

I think the teachers' college masters are going to have to be on their toes a little more...when somebody might see them again, a repeat performance, you know.

...and maybe in a sense...putting us on show or on the block, so to speak, and any mistakes or any shortcomings that might crop up might be a reflection on them or something of that nature. So there's this ambivalent feeling towards the thing, I think I'm sort of in that category too.

The threat of being visible to colleagues is evident in the above responses and would appear to have induced at least some of the manifestations of stress, the second stage in the reaction process.

The second negative theme in relation to the introduction of television seemed to derive from an insecurity premised on a lack of knowledge and experience with the new medium. Responses indicative of inadequacy due to lack of experience or training in the medium were evident for 55 per cent of the subjects. Again the theme can be well illustrated:

> Most of us feel inadequate I think in using it and handling it because of lack of experience. Perhaps we're just a little wary at the moment.
>
> ...and the new knowledge that is necessary and the lack of know-how and so on are all things that I think tend to make people somewhat insecure.
>
> I suppose like me, none of us really know how to use it and unskilled in its use you have to defend yourself against it...
>
> I think basically, why we have mixed emotions is for this reason, that we aren't really feeling capable or aren't really confident in its potential and what it can be, and what its uses can be.

As with apprehensions about increased visibility, uncertainty through lack of experience with knowledge of television would appear to have been at least mildly stressful. Feeling "wary", "insecure", having "mixed emotions", and "defending oneself" are variations on this theme which would support such an inference. At least for some respondents television did or could have threatening implications based on increasing colleague visibility to their work performance or through the lack of appropriate skills and knowledge to deal with the new medium. Concomitant with these negative evaluations was an evolvement to the second stage of the reaction process, that of stress. At this stage two alternatives are possible: either the stress and uncertainty can be accommodated without disruption within the capabilities of the system to absorb and handle such stresses, or the reaction process will advance to the third stage, that of systemic disorganization. Under the stress of both inter-staff visibility and lack of appropriate knowledge of the medium, accommodation was made through the social system's own sustaining mechanisms and evolvement to the disorganization reaction did not take place.

The stress associated with the visibility of work performance was resolved by linking the exposure potential of television to an innovation already present in the system. Team teaching in an integrated-instruction programme within the college was already producing inter-staff visibility. Thus the system itself was in the process of redefining work role to include inter-staff visibility and the threat of exposure offered by television was not perceived as unique but could be accommodated as part of a process already under way. On this theme 67 per cent of the respondents who had expressed concerns regarding visibility further noted that increasing staff visibility was already occurring and that exposure through television was not really adding any new problems. The following excerpts demonstrate that the respondents saw television as perhaps enhancing and facilitating a programme already under way:

....you know we've been doing what we call an integrated instruction group set up with part of the school and I was rather heavily involved with that from the beginning and I see it as meshing very nicely with the use of educational television.

Well, if you have looked upon your role as one that you taught a class of students and you shut the door behind you and no one else knew what your programme was about nor did you expect them to, you're going to have to share what you're doing with everyone else and with our integrated programme that we've been trying out these last few years we have been doing that pretty much ourselves.

It's a matter of not only teaching one class but it's possibly a matter of teaching or instructing a number of staff that are not familiar with a particular specialized field of work, and if other staff members are going to be involved as they may very well do in integrated instruction, then I think TV will lend itself to integrated instruction.

I think maybe there are more possibilities for team teaching, panel discussions, in other words right now we're pretty well isolated, I teach my class and somebody else teaches theirs but with television why not put the four into a panel discussion and funnel it out....

As with the threat of visibility, the stress of uncertainty with television due to feelings of inadequacy in training and 'know-how' was accommodated within the system's own flexibility and capacity to handle change. For those staff members who did not have the knowledge and experience to deal with the new medium, accommodation was effected by the utilization of change facilitating mechanisms already present in the system, such as the use of experts, in-service training programmes, and by specific time allocated to staff members themselves to experiment and determine the most suitable employment of the television facility. Of those respondents who indicated that they did not have enough knowledge or experience to effectively handle television, 76 per cent went on to suggest that acquiring a knowledge would be a simple and relatively convenient task. The following excerpts illustrate this adjustment:

> ....it's something that we need to experiment with and find out what uses we could make of it. I don't know yet just how much we can use it, but it will be interesting to find out.
>
> They'll have to learn how to use it. WHAT ADJUSTMENTS WILL THEY HAVE TO MAKE? Well, I would see that we should have some sort of in-service training....
>
> ....if something is new alright, let's try it out, let's examine it, let's get some research on it and find out.
>
> ....we have to do a lot of experimenting but I think there is a good future in its use really.

> I don't think we've done very much with it to date, of course, but I certainly feel that television has a role to play in what we're trying to do here. It's just a matter of learning how to use it.

Clearly, although felt inadequacies in knowledge of and experience with television imposed a mild stress reaction, the stress could be accommodated and resolved by employing a strategy that the system had utilized in the past to absorb new technologies, one that provided masters with the time and responsibility to determine the role of the innovation.

The foregoing analysis of the interview data indicates that television as a technological innovation introduced into the social system of the college did not precipitate change or modification within that system. The concept of television as a medium was simply absorbed and the system remained essentially the same. Referring back to the paradigm it is evident that the reaction process to television followed either Path 1 with television positively interpreted as "just another audio-visual aid" and as such immediately accommodated, or followed Path 2 along which there was a negative interpretation with a consequent stress reaction. However, this stress was not strong and the threats of inter-staff visibility and inadequate training were resolved and accommodated within the system. No matter which reaction path evolved the basic structure of the system was not modified by the introduction of television.

The Reaction Process and the College Merger

Although staff reactions to the merger of the college as a faculty within the university did have components suggestive of a positive initial interpretation, the dominant and most pervasive interpretations were overwhelmingly negative and indicative of considerable stress. The only positive theme of any consequence that emerged was an interpretation of the move on to the campuses as upgrading the present quality and status of the students of the college, and the prestige of the elementary teaching profession in general. Seventy-one per cent of the respondents suggested that the university merger would uplift the status of elementary school teaching and teachers.

> We're going to elevate the term "profession" to be really what it should be by this programme.
>
> I think the prestige of teachers should be improved also, when they're graduates of the university.
>
> The move to the university undoubtedly will add much more prestige to the teacher education programme.
>
> I think of, oh, a number of things, perhaps, improved image, improved academic standing within the profession that this alliance with the universities is perhaps inevitable and desirable.

Although the elevation of the status and prestige of the programme and its product is a positive interpretation and consequently not stressful, it is outweighed by the substantial difference in status apparent between the university and the teachers' college. Higher status was generally accorded by the respondents to the staff of the university. This recognition of

differences in status between the two institutions was founded on two disparate legitimating factors: for university staff, status was derived from academic training and qualifications, whereas for teachers' college staff, academic credentials were secondary and status was legitimated by service and experience in the teaching field and in the preparation of teachers. This status distinction was recognized by the respondents who generally feared that on moving into the university setting, status based on experience would not be legitimate and academic qualification would be the primary criterion for defining status. As members of the university staff with lesser credentials they anticipated they would be relegated to positions of lesser prestige and status than those of other faculty members. As one respondent phrased the concern:

> ....what relatinship are we going to have with university faculty; is it going to be a second cousin kind of relationship?

The fear of status loss was the most pervasive of all themes derived from the data with 94 per cent of respondents noting the threat imposed on their present status. The following selected responses provide a graphic picture of a social system under the stress of status loss:

> Well, we're very apprehensive of the whole thing because I'm talking about personal apprehension about our status in the new set-up itself, that the universities are academically oriented and our academic background, of course, is not as strong as an educator at the university.
>
> These people are going to feel that they're outcast because they don't have doctorates or masters degrees....
>
> From what I hear I don't think they're particularly happy about it....the biggest thing I think is that, as you probably know, they are people with masters, Ph.D's and here we are down at the bottom of the ladder, so to speak, in relation to them.
>
> They are wondering just what the relationship will be between the staff of the universities and the staff of the faculty of education as it would be, I suppose. Some of this fear I think stems from the difference in academic qualifications. Most of us don't have a Ph.D. or an Ed.D. and I think this is where there is some fear and a little bit of concern on the part of teachers' college staff members.

A further theme associated with the university merger although less pervasive than the threat to status, indicated that present salary, security, retirement benefits, and other economic aspects of employment in the teachers' college were endangered, or at least could be negatively affected in integration with the university. This fear was based on reality as teachers' college staff compared with university faculty with similar academic training at the present time enjoy favourable advantages in salary, pension benefits, etc. Threat to economic aspects of employment with the university integration was a theme referred to by 68 per cent of the respondents:

....if we only knew what the devil the score is going to be, because there are so many things that come into play -- for instance, salary-wise, pension-wise. Let's face it, we live in a materialistic world and everybody is interested in a buck, and that's what it amounts to.

Now I don't know what the university salaries are or what their fringe benefits are, but there could be a problem there, saying, look, there's lad with less than I have, getting more. I think there has to be a unification and this is a very considerable problem right now because let's face it -- it is a major problem. I would be inclined to think that unless you're a full-fledged professor that you could run into that problem.

Well, I think that there's no doubt about it, some of them are getting their backs up about the salary situation, you know, that they want parity and this is going to be one of the stumbling blocks....this is the problem once again of the almighty dollar and it's a problem that they're going to have to solve.

I imagine that probably it might be resisted by those people who want to maintain their present salary level.

The threat to present economic security, although a less pervasive theme than the status dilemma, was indicative of a negative interpretation of the university merger, and as with the status question had invoked stress reaction.

In order to determine whether evolution to the disorganization phase of the reaction process had taken place, it was necessary to discern whether or not the stresses produced by status and economic threats were such that they could be accommodated within the system. For the less powerful of the two threats, economic insecurity, the data did suggest that to some extent this stress could be resolved and could be accommodated without undue disruption in the system. This accommodation took several forms and could not be delineated as a single theme. One such resolution was to draw and rely on administrative assurances that salary and other benefits would not be lost with the university merger:

I hope things turn out financially sound as far as I'm concerned. And we've been more or less guaranteed that this is what will happen.

....we may lose a little of the security or tenure that we have obtained through the years here....but on the other hand we have been assured, I think of our tenure possibly, and we would initially not lose salary and pension.

Another resolution of the threats to economic benefits with the university merger was based on anticipated gain in some areas as compensation for possible losses in others. The possibility of obtaining sabbatical leave presently not available was perceived as counter balancing possible economic losses. Similarly the prospects of having free summers as opposed to the present practice of employing the summer period in in-service training programmes as part of basic contractual obligations, was seen as a compensatory factor offsetting potential disadvantages:

> Well, presumably the working conditions, to use that term very generally, should improve, that is to say, we would more likely either have a summer free if we wanted to or be paid additional for a summer's work. We'd more likely be able to get sabbatical leave.
>
> I think that working in a university we're going to be working on a university year and I think we'll have more say in what we do with this extra summer recess, whether we work or do research or what we do, I think that's to our benefit.
>
> ...perhaps maybe one of the assets we might gain would be sabbatical leave which we don't have now...

In all, 48 per cent of the respondents who had viewed the university integration as potentially threatening to salary and present staff benefits went on to qualify their responses by either minimizing the problem in the face of administrative assurances or mentioning compensatory gains that could be made. It is evident that at least in part the stress introduced by threats to present economic and benefit security could be accommodated and was not intense enough to precipitate disorganization within the system.

Although it would appear that economic threats were resolvable and could be accommodated, stress induced by the threats to status and prestige, the most pervasive of all themes, could not be resolved and consequently appeared to generate a disorganization reaction within the system. The substance of the status threat involved the fear that when the teachers' college was integrated with the university, status ascription would be based on academic qualifications and the comparatively lesser credentials of the teachers' college staff would jeopardize their status claims and relegate them to second class citizenship in the university community. The status threat was seen as being resolvable by up-grading qualifications to parity with the university faculty. For the college staff up-grading for status equality was equated with the acquiring of higher academic degrees. Sixty-one per cent of the respondents made mention of the need to upgrade qualifications by the taking of further degrees in preparation for the university integration. The following excerpts illustrate this theme:

> Well, I think all of us are going to ...eh...there's going to be a difference in maybe the necessity of getting a lot of extra degrees.
>
> I think we're going to have to improve our -- in order to satisfy them a bit -- we're going to have to improve our qualifications sort of. We're going to have to go out and take some other degrees. I know I'm thinking or knowing that I'm going to have to take something else.

> I suppose we will have to upgrade our academic qualifications ....simply for the sake of status.
>
> There will have to be a general upgrading I would think, of qualifications as far as members of the faculty of education are concerned.

Clearly the integration with the university precipitated a perceived need for further academic accreditation among the respondents; however, this solution to the status threat was not entirely satisfactory and for many of the respondents was an added problem in that, although further degrees and accreditation were necessitated, the acquisition of these degrees was problematic. Of those respondents who had noted the necessity of acquiring further accreditation 53 per cent went on to detail that they would not undertake further study or that to pursue further studies was difficult if not altogether impossible for a variety of reasons:

> Many of us like me have only a B.A., although I will have the M.Ed. eventually, but doctoral studies are practically impossible since we don't have the sabbatical leave.
>
> Well, some people on this staff have had difficulty getting acceptance, say, at university and because on doing a night school degree some of us slack a little bit, if we get through that's enough and after working all day long and then studying half the night for married people in particular it's a pretty rough go.
>
> If, for example, they ask for at least a master's degree I'm sure that not everybody could do it. Married men, for example, can't leave their work for two years to go and study for a master's degree.
>
> I don't know, I think I'm going to find it pretty tough to pass an M.Ed. degree. I don't think I'll be able to do it. I'll have to try but....

It is evident that the upgrading of academic credentials to gain parity with the university faculty was not a viable resolution to accommodate threats to status and prestige for many of the respondents. Although the social system of the teachers' college made provision for the upgrading of skills in relation to the introduction of new technologies, such as television, the system did not have a built-in mechanism for facilitating the further educational training required for academic equality with the staff of the university. The lack of sabbatical leave, free summer periods and the impositions on personal life of part-time study were specific obstacles deterring further academic preparation for members of the college staff.

The inability of the system to accommodate the status threat imposed by university integration precipitated a strong disorganization reaction within the college. One manifestation of this disorganization was an unprecedented staff turnover at the end of the previous academic year. One-third of the staff had terminated their employment at that time with the implication being that the threat of university integration was the primary cause. The relationship between termination of employment and the university merger was expressed in the following way by one of the respondents:

....from experience right now I would say no, that they won't all and in fact some have felt they couldn't make the adjustment and they have left the teachers' college already, and I think the main reason they've left is because of this possibility of takeover of the universities. We had ten new staff members this year. WAS THIS A HIGH TURNOVER? Right, and it has occurred this past year at a higher level than at any other time.

In all 55 per cent of the respondents either commented on what had been an unprecedented turnover rate or indicated that possibility of themselves leaving for employment elsewhere.

Well, at the present rate of turnover I believe our staff averages less than three years experience at a college. IS THIS PRESENT RATE OF TURNOVER HEAVY? It's very heavy and it's unusual.

This is my first year here and I don't know that much about the past history. I know there's been a tremendous staff changeover. One-third of the staff is brand new this year at the college.

....if I couldn't make the change in one place or I didn't feel comfortable I would simply go back to teaching....

I'm hoping X University will employ me when the time comes ....if I thought they weren't going to I think I'd have to look around for another job quickly.

It can be clearly seen that leaving the system was a major reaction to the status threat imposed by the university integration.

Although for some systems high member turnover is an expected and in-built component of the organization, most social systems depend on continuing membership for stability and have a restricted capability to absorb member turnover. System capability to accept turnover is shaped by the extent to which incoming members must be socialized and inculcated to the defined goals and behaviors of the system and by the capacity of the system induction processes to perform this function. Systems subjected to high rates of turnover, such as military institutions, characteristically have highly developed and extensive induction programmes. In systems where work functions require low levels of expertise, such as with seasonal harvesting, members are easily replaceable with little or no induction or training programme required. Where systems perform a function requiring high levels of expertise and do not have an extensive induction capability, high member turnover can be extremely disruptive and in some cases threaten the survival of the system.

The fact that one-third of last year's staff had left and many of this year's staff were considering leaving was representative of a disorganization reaction that threatened the very survival of the system. In order for the system to exist in some stable form in the face of this disorganization and threat to survival it was necessary for a reorganization reaction to evolve.

For staff members of the college the reorganization reaction took the form of a redefinition of roles and functions within the system and by implication a redefinition of system goals. In redefining their work roles the subjects were able to both accommodate the status threat and facilitate system reorganization, and consequently check the disorganization process and the threat to system survival. However, in so doing the system was extensively modified and changed as represented by Path 3 of the reaction process paradigm.

The reorganization process was evident in a major theme involving the redefinition of role to exclude the teaching of content and to focus on teaching methodology. Although at the present time both functions are performed by the teachers' college masters, the redefinition suggested that other faculties of the university would assume the responsibility for teaching content and theory, whereas, the teachers' college staff would have the responsibility for pedagogical skills, methodologies and technologies. This splitting of current function, and redefinition of role to exclude content and theory to emphasize methodology was predicated on attaining status parity with the university staff. College masters with expertise based on long experience rather than academic training would be responsible for the technical and practical aspects of teacher-training while the academically qualified university faculty would be responsible for subject content and basic theory. Thus experience and academic qualifications were made functionally equivalent and by implication equated the status of the masters with that of the university professors. This is reflected in the following excerpts:

> I think maybe we have a Ph.D. degree in another way, in our experience as far as teaching the kids and working up through the school system, knowing what goes on and knowing what schools are like and so on.
>
> ....you're an expert in teaching technique and your ten years of experience and as a principal and a teachers' college master, the equivalent in terms of your actual knowledge of process to somebody who has the Ph.D.
>
> Now as far as I'm concerned I think that we have something that the faculties of the present university structure don't have and that is we do have a tremendous background of experience.
>
> I suppose the one thing that I do have in my favour, would be you know, a period of time as in actual practice and so on, and these things I think are probably more important than just straight academic pursuits in the field of teaching young children from methodology.
>
> I think they don't always realize that they may be specialists in their field but we are also. I consider myself a specialist in my field too, even though it doesn't have the same degree to go along with it.... ON WHAT WOULD YOU BASE YOUR KIND OF SPECIALTY? Just on teaching elementary youngsters, having done it and having studied just as fully at that as someone might for a doctorate and I think in a much more applicable way.

Clearly the respondents were equating experiential status with the higher academic degrees of the university staff.

By equating experience with academic preparation a modification of the perceived college staff role was precipitated. This functional change assumed a division of labour between college and university faculties, with the underlying logic that if practical experience was the criterion of status for masters and academic qualification for university staff then it followed that with the merger the practical aspects of teacher-training would be the legitimate domain of the teachers' college staff and theory and content the sphere of competence for the university faculty. The present teaching of content and theory would be assumed by other faculties or by other more qualified members of the proposed faculty of education, while the masters would assume sole responsibility for methodology. Eighty-seven per cent of the respondents mentioned this new division of labour which would split off methodology from content and theory:

> ....whereas now we teach both content and methodology, I think there will be less content taught by us and more by the university staff, professors who specialize in that, and our function when it comes to the teacher training will be more on methodology.

> Well, we will be relieved of some of our duties. We teach two or three things here that are academically oriented and we're not the best people to teach them. Our Ed. Psych. classes are much better taken by a person with an advanced degree as such in educational psychology. The same with our history and philosophy courses. Historians or philosophers at the university level are much better qualified than we are to teach these. I feel therefore, that we will be concentrating upon general methodology, school management and the methods in specific subjects.

> ....we're the people with the practical experience, we're the people who are giving them the practical side of the thing and take my job, for instance. Now I won't be teaching Ed. Psych. in university, that's for sure. Some Ph.D. obviously, hopefully, will be better qualified in Ed. Psych., but maybe I'm better qualified to say just what happens when you try such a technique in an actual classroom because I've tried it and probably he hasn't.

> Well, I do think that the university professors, of course, with their backgrounds in psychology would probably teach our academic subjects such as Psych. and History of Education. On the other hand, many of them have not had any training in teaching methods. So why can't they be left to us? This is our specialty.

It is evident that reorganization within the college social system has focussed on a redefinition of role function. Inasmuch as the integration with the university had not yet taken place, this reorganization must be considered transitory in nature and a projection of anticipated circumstance. The teachers' college staff as a defense against threatened status loss with the university merger have redefined and narrowed their role to that of specialist in teaching methodology. This individual role redefinition implies a reduced and more limited function for the teachers' college system in integration with the university, and thus the system has undergone basic and extensive modification -- it has changed.

The development of this modification within a social system confronted with change appears to have followed almost ideally the consecutive phases delineated in Path 3 of the reaction process paradigm. Passing through: negative interpretation, high stress, disorganization and reorganization, systemic change has occurred.

Summary

This study investigated the impact of two types of change on a social system of a teachers' college from the perspectives of system members, teachers' college staff. A reaction process paradigm was conceptualized and 31 members of the college staff were interviewed in an attempt to test the validity of the paradigm. The interview data were content analyzed to isolate basic themes associated with reaction to change.

It was found that the impact of television on the social system of the teachers' college was minimal and did not precipitate systemic change. The system resolved the threat of increased visibility and lack of knowledge of television as an educational medium with little stress. The lack of television "know-how" was accommodated by mechanisms already present in the system, such as in-service training programmes, access to advice and technical help of experts, and time allocated for the specific purpose of determining the effectiveness of technological innovations. Another innovation already present in the system was contributing to increased staff visibility and television was identified as being inter-related with this programme and consequently was seen as not adding any new problems. For the advent of television the reaction of the system was either one of immediate accommodation or one of short-term stress followed by system accommodation, with the end results in both cases being a social system relatively unchanged.

Whereas the introduction of television did not induce systemic change, there was considerable evidence to indicate that this was not the case for the introduction of the proposed university merger. Here an impending threat to the status of system members produced a high stress reaction. The system did not have mechanisms to facilitate the absorption of the change and a disorganization reaction that took the form of unprecedented staff turnover followed. To deter system disorganization and accommodate threats to staff status a redefinition of system roles was effected. The teaching experience of the college staff was equated with the academic qualifications of the university faculty with the implication that the teaching of content and theory would be the responsibility of the university faculty while training in the methodology of teaching would be the primary concern of college staff. Since both these functions are presently the responsibility of the teachers' college staff, this division of labour represented a basic modification of the system in the form of a functional change.

In analysis of college staff reactions to both the introduction of television and the university merger, it was evident that the reaction process paradigm provided a suitable model for understanding and documenting change as a process phenomenon in which the components of the process determine the impact of change on a social system.

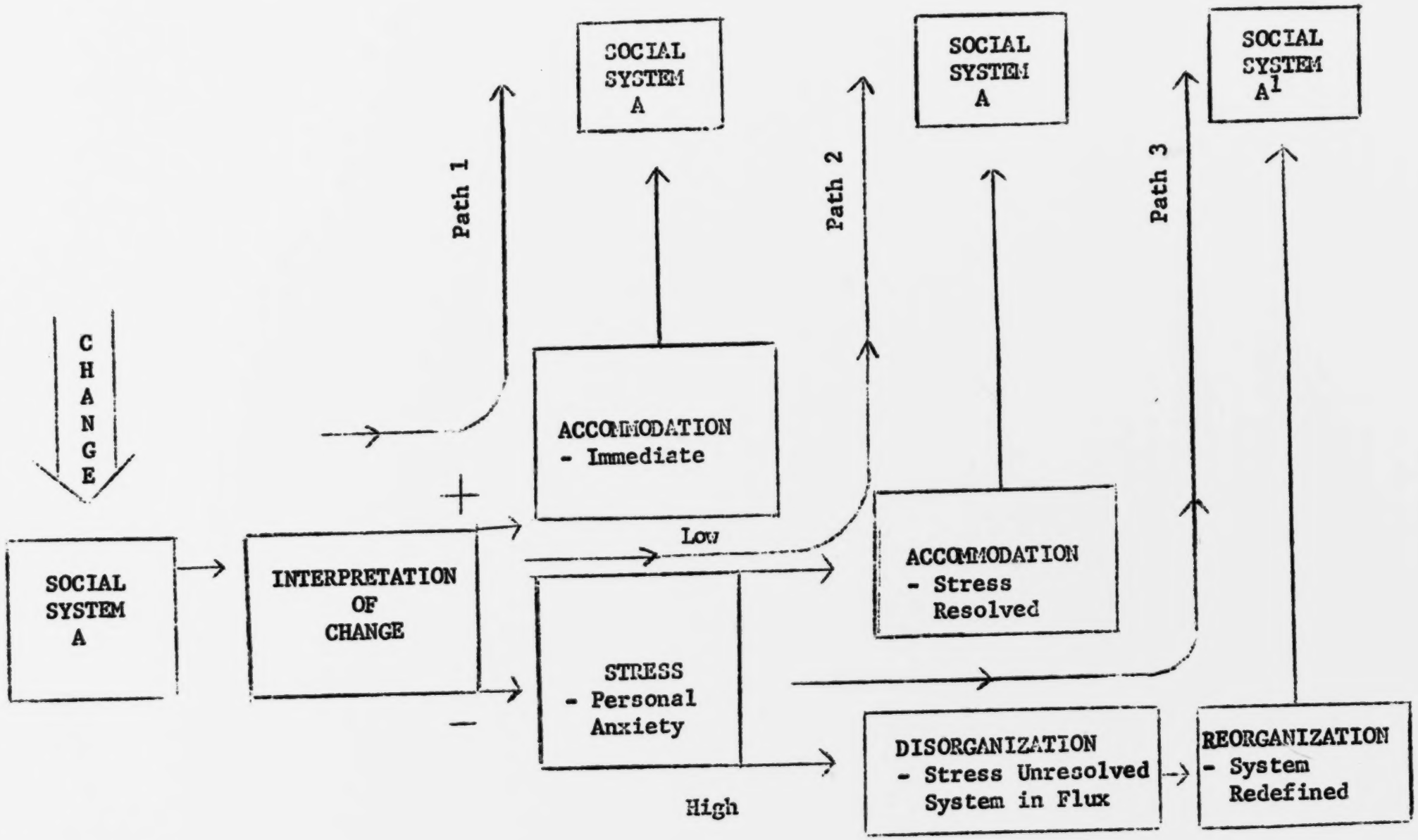

FIGURE 1

A REACTION PROCESS PARADIGM

FOR SOCIAL SYSTEMS CONFRONTED WITH CHANGE